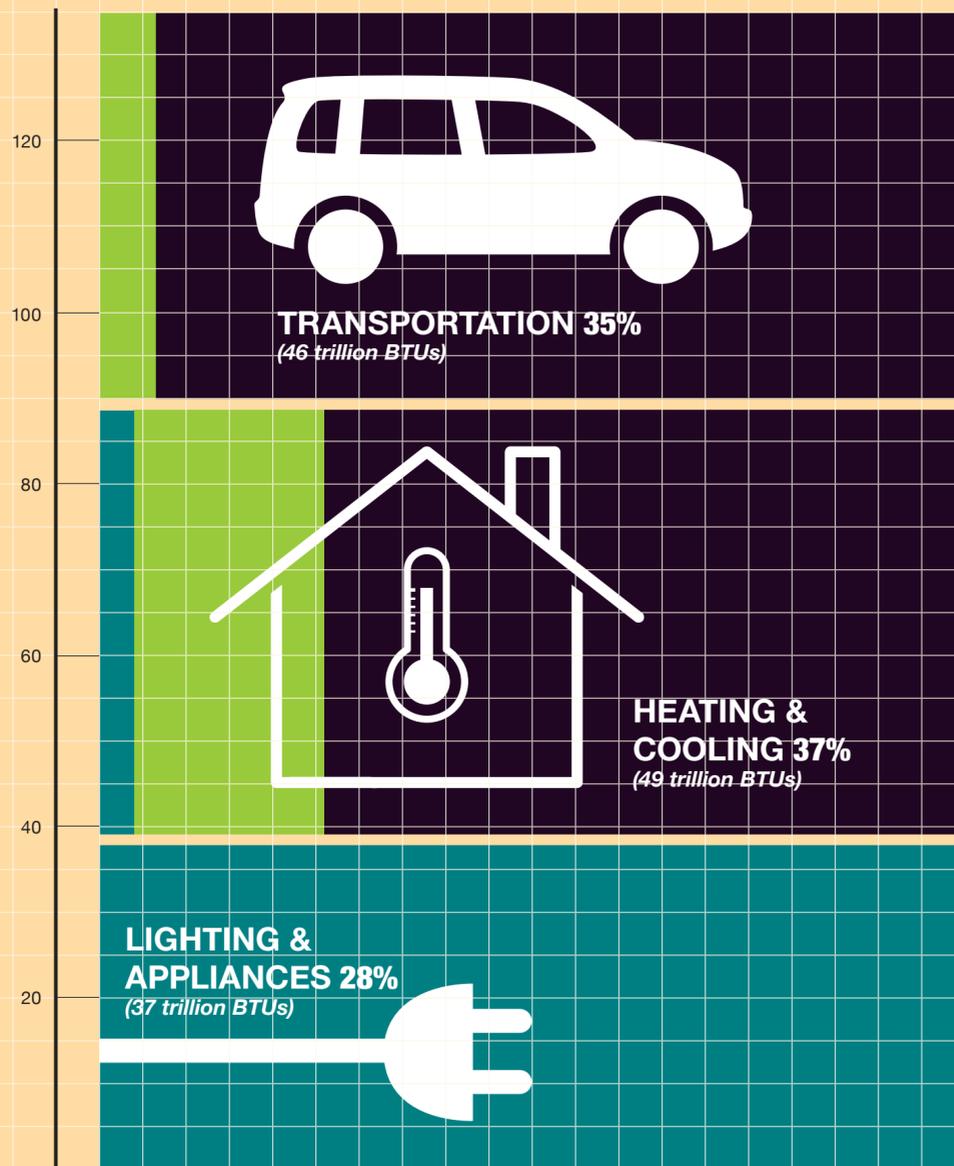


LESS ENERGY, MORE RENEWABLES

Getting to Vermont's Goal of 90% by 2050¹

Current energy sources & uses

(total energy use: 132 trillion BTUs)



2015

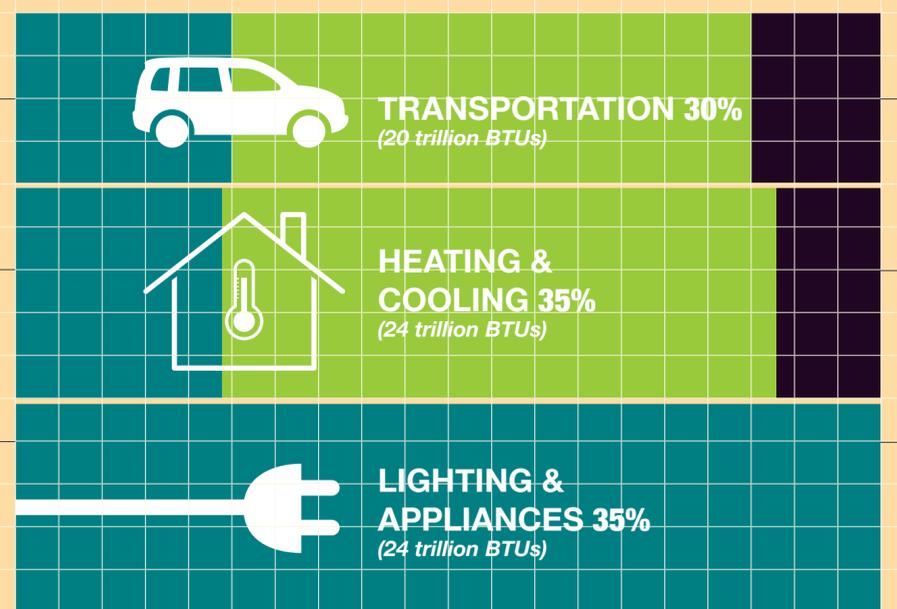
Sources: ■ FOSSIL FUELS² ■ BIOFUELS³ ■ ELECTRICITY

Uses: **TRANSPORTATION** includes cars, trucks, buses, trains and airplanes.
HEATING & COOLING includes temperature control and water heating for homes, stores, and factories.
LIGHTING & APPLIANCES includes anything we plug in (like appliances) or hardwire (like overhead lights and large motors).

Scale: = 250 billion BTUs⁴

Target energy sources & uses

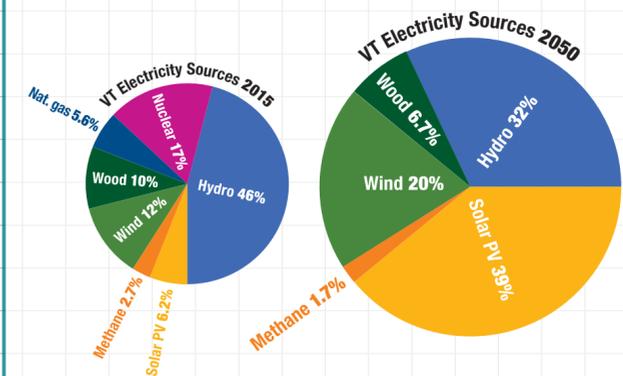
(total energy use: 68 trillion BTUs)



2050

WHERE DOES ELECTRICITY COME FROM?

Electricity comes from many sources. The pie charts below show the fuels used to generate the electricity purchased or generated by Vermont utilities for Vermont customers. Your electric bill pays for the electricity generated by these sources, as well as the electric lines, labor, and parts required to keep the system running reliably.⁵



HOW DO WE GET THERE?

To reach our energy goals in Vermont, we will need to make major changes in where we get our energy from and how we use it. We can make some of these changes at home, but we also need to work together to change usage in our schools, communities, and state. Here are the three ways to get there.

1. CONSERVATION

Choose to use less energy.

- Carpool, walk, or bike instead of driving.
- Turn down your thermostat at home or school.
- Turn off the lights when you leave the room.

2. EFFICIENCY

Use less energy to do the same amount of work.

- Switch to hybrid cars and buses from gas-powered ones.
- Insulate and seal your home or school to reduce heat loss.
- Replace inefficient light bulbs with energy-saving LEDs.

3. MORE RENEWABLES

Get less energy from fossil fuels.

- Switch to electric or biodiesel cars and buses.
- Heat with wood pellets or chips in your home, school or town.
- Install solar PV panels on your home or school, or in your town.



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OUR MISSION is to build a deep understanding of energy through education, encouraging choices that result in sustainability in our communities, economy and environment.

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NOTES

1. The State of Vermont has adopted a plan to reduce energy use and change where we get our energy. The Vermont Comprehensive Energy Plan 2016 charts a course to having 90% of all energy use in Vermont come from renewable energy sources. An executive summary of the plan can be found at tinyurl.com/VTenergyplan. The data in the bar charts is estimated from "Exhibit 4-7. Sector Uses of Primary Energy, Projected to Meet 2050 Goals and 2025 Benchmark Targets (BBtu)," in the Vermont Comprehensive Energy Plan 2016.

2. Fossil fuels include oil, natural gas, propane, diesel, gasoline, and coal (but very little coal is used directly in Vermont).
 3. Biofuels include cord wood, wood chips, wood pellets, and liquid biofuels, such as biodiesel and ethanol (alcohol).
 4. A BTU is a measure of energy. If you completely burn up a large standard wooden match, it gives off about 1 BTU of energy. We typically measure heat in BTUs and electricity in kilowatt hours (kWh). There are 3,412 BTUs in 1 kWh.
 5. The pie at left is also shown in the middle of the 2015 VEEP poster "Slicing the Electricity Pie," titled "What Your Utility Bills Pay For." Electricity source data comes from the Vermont Department of Public Service.